

**Notice of Allowability**

Application No.

09/853,360

Examiner

Joseph P. Hirl

Applicant(s)

GRINDROD ET AL.

Art Unit

2121

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to June 21, 2004.
2. ☒ The allowed claim(s) is/are 1,3-12,14-23,25-37 and 39-68.
3. ☒ The drawings filed on May 2, 2004 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All   b) ☐ Some\*   c) ☐ None   of the:
    1. ☐ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
  - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
    - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
  - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),  
Paper No./Mail Date 20040901.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

***Examiner's Amendment/Reasons for Allowance***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

***In the Claims***

2. The following amendment supersedes all prior claim amendments:

1. (Currently Amended) A system for changing business processes method ~~for customizing business rules of a business logic application~~, comprising:

means for serving a content page to a client browser of a client by a server, the content page allowing for entering and modifying of data relating to a business logic-rule;

means for generating data by the server according to a predefined format from information received via the content page; and

means for automatically committing the generated data in the predefined format into a database, the database storing data including data relating to business logic-rules for implementing business ~~rules~~ logic-as entries in the database, the generated data being committed into a corresponding entry in the database;

wherein upon said committing, the committed database business rule entry is ready for execution by the business logic-application;

wherein the entering of data includes selectively enabling, conditioning, calibrating, and disabling the business logic-rule via the content page provided by the server.

2. (Cancelled)

3. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 1, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

4. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 1, further comprising means for, prior to said committing, automatically verifying the entry corresponding to the business logic-rule in the predefined format using DTDs (Document Type Definitions).

5. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 1, wherein said committing the entered data according to the predefined format includes committing the entered data according to a predefined XML format.

6. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 5, further comprising means for, prior to said committing, automatically verifying the entry corresponding to the business logic-rule in the predefined XML format using DTDs (Document Type Definitions).

7. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 1, wherein said serving the content page to the client browser includes serving an expression builder content page for entering and modifying of the data relating to the business logic-rule expressed as an expression having symbols to be resolved when an instance of the business rule is one of created and executed by the business logic-application.

8. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 7, wherein data for each business rule includes schedule data, the schedule data selectively includes schedule expressed as an expression via the expression builder content page.

9. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 7, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

10. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 7, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

11. (Currently Amended) The system for changing business processes ~~method for customizing business rules~~ of a business logic-application of claim 1, wherein said serving the content page to the client browser includes serving a business rules management content page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

12. (Currently Amended) A computer program product for changing business processes ~~customizing business rules~~ of a business logic-application, comprising:

computer code that serves a content page to a client browser of a client, the content page allowing for entering and modifying of data relating to a business logic-rule;

computer code that generates data according to a predefined format from information received via the content page;

computer code that automatically commits the generated data in the predefined format into a database that stores data including data relating to business logic-rules for implementing business ~~rules~~ logic-as entries in the database, the computer code commits the generated data into a corresponding entry in the database such that the committed database business rule entry is ready for execution by the business logic-application; and

a computer readable medium that stores said computer codes;

wherein computer code that serves the content page also allows selectively enabling, conditioning, calibrating, and disabling the business logic rule via the content page.

13. (Cancelled)

14. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic-application of claim 12, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

15. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic-application of claim 12, further comprising computer code that automatically verifies the entry corresponding to the business logic-rule in the predefined format using DTDs (Document Type Definitions).

16. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic-application of claim 12, wherein computer code that commits the entered data according to the predefined format includes computer code that commits the entered data according to a predefined XML format.

17. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic-application of claim 16, further comprising computer code that automatically verifies the entry corresponding to the business logic-rule in the predefined XML format using DTDs (Document Type Definitions).

18. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic-application of claim 12, wherein the computer code that serves the content page includes computer code that serves an expression builder content page for entering and modifying of the data relating to the business logic-rule expressed as an expression having symbols to be resolved when an instance of the business rule is one of created and executed by the business logic-application.

19. (Currently Amended) The computer program product for changing

business processes ~~customizing business rules~~ of a business logic application of claim 18, wherein data for each business rule includes schedule data, the schedule data selectively includes schedule expressed as an expression via the expression builder content page.

20. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic application of claim 18, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

21. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic application of claim 18, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

22. (Currently Amended) The computer program product for changing business processes ~~customizing business rules~~ of a business logic application of claim 12, wherein the computer code that serves the content page to the client browser includes computer code that serves a business rules management content page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

23. (Currently Amended) A business logic application system adapted for changing business processes associated with a business application ~~customizing business rules~~, comprising:

- a client having a client browser;
- a database for storing data including data relating to business logic rules for implementing business rules ~~logic~~ as entries in the database; and
- a server having a web server adapted to serve at least one content page to the client browser for entering and modifying of the data of a business

logic-rule corresponding to an entry in the database,

wherein said server is adapted to automatically commit an entry corresponding to the business logic-rule into the database according to a predefined format after modifications via the content page at said client browser and wherein the committed database business rule entry is ready for execution upon commitment by said server;

wherein each business logic-rule can be selectively enabled, conditioned, calibrated, and disabled via the content page provided by the server at the client browser.

24. (Cancelled)

25. (Currently Amended) The business logic-application system of claim 23, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

26. (Currently Amended) The business logic-application system of claim 23, wherein said server is adapted to verify the entry corresponding to the business logic-rule in the predefined format using DTDs (Document Type Definitions).

27. (Currently Amended) The business logic-application system of claim 23, wherein the predefined format for committing the entry corresponding to the business logic-rule into the database is a predefined XML format.

28. (Currently Amended) The business logic-application system of claim 27, wherein said server is adapted to verify the entry corresponding to the business logic-rule in the predefined XML format using DTDs (Document Type Definitions).

29. (Currently Amended) The business logic-application system of claim 23, wherein said server is further adapted to serve an expression builder content page to the client browser for entering and modifying of the data of the business logic-rule expressed as an expression having symbols to be resolved when an

instance of the business rule is one of created and executed.

30. (Currently Amended) The business ~~logic~~-application system of claim 29, wherein data for each business rule includes schedule data, the schedule data selectively includes a schedule expressed as an expression via the expression builder content page.

31. (Currently Amended) The business ~~logic~~-application system of claim 29, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder content page.

32. (Currently Amended) The business ~~logic~~-application system of claim 29, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder content page.

33. (Currently Amended) The business ~~logic~~-application system of claim 23, wherein said server is further adapted to serve a business rules management content page to the client browser for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

34. (Currently Amended) An application/web server for implementing a business ~~logic~~-application system adapted for changing business processes associated with a business application~~customizing business rules~~, comprising:

a web server in communication with a client browser of a client and adapted to serve at least one non-programmatic interactive user page to the client browser for obtaining data for a customized business ~~logic~~-rule; and

an application server in communication with a database containing data relating to business ~~logic~~-rules for implementing business ~~rules~~~~logic~~ as entries in the database, wherein the data obtained for the customized business ~~logic~~-rule corresponds to an entry in the database,



wherein the application server is adapted to dynamically and automatically commit the data as an entry corresponding to the customized business logic-rule into the database in a predefined format after obtaining the data via the user page at said client browser and wherein the committed database business rule entry is ready for execution upon commitment by said application server;

wherein each business logic-rule in the database can be selectively enabled, conditioned, calibrated, and disabled via the at least one non-programmatic interactive user page.

35. (Currently Amended) The application/web server for implementing a business logic-application system of claim 34, wherein said application server is adapted to verify the entry corresponding to the customized business logic-rule in the predefined format using DTDs (Document Type Definitions).

36. (Currently Amended) The application/web server for implementing a business logic-application system of claim 34, wherein the predefined format for committing the entry corresponding to the business logic-rule into the database is a predefined XML format.

37. (Currently Amended) The application/web server for implementing a business logic-application system of claim 36, wherein said application server is adapted to verify the entry corresponding to the business logic-rule in the predefined XML format using DTDs (Document Type Definitions).

38. (Cancelled)

39. (Currently Amended) The application/web server for implementing a business logic-application system of claim 34, wherein data for each business rule includes general information data, condition data, action data, and schedule data.

40. (Currently Amended) The application/web server for implementing a business logic-application system of claim 34, wherein the at least one non-

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programmatic interactive user page includes a business rules management page for displaying business rules stored as entries in the database and for allowing one of selecting to create a new business rule and selecting to modify an existing business rule.

41. (Currently Amended) The application/web server for implementing a business ~~logic~~-application system of claim 34, wherein the at least one non-programmatic interactive user page includes an expression builder page expressing data of the business ~~logic~~-rule as an expression having at least one symbol that is to be resolved when an instance of the business rule is one of created and executed.

42. (Currently Amended) The application/web server for implementing a business ~~logic~~-application system of claim 41, wherein data for each business rule includes schedule data, the schedule data selectively includes a schedule expressed as an expression via the expression builder page.

43. (Currently Amended) The application/web server for implementing a business ~~logic~~-application system of claim 41, wherein data for each business rule includes action data, the action data selectively includes action data expressed as an expression via the expression builder page.

44. (Currently Amended) The application/web server for implementing a business ~~logic~~-application system of claim 41, wherein data for each business rule includes condition data, the condition data selectively includes a condition expressed as an expression via the expression builder page.

45. (Currently Amended) A ~~method~~system for processing business ~~logic~~ rules of a business process system and changing business processes associated with a business application, comprising:

means for writing an event job into a job queue for each occurrence of an event having at least one business rule based on occurrence thereof;

means for creating a business rule instance for each business rule

corresponding to the event job;

means for testing conditions of each business instance;

means for writing the business rule instance into the job queue

corresponding to each business instance for which the conditions testing succeeds;

means for deleting the event job from the job queue;

means for executing the business rule instance; and

means for deleting the business rule instance from the job queue;

wherein the business logic-rules can be selectively enabled,

conditioned, calibrated, and disabled via a content page provided by a server at a client browser.

46. (Currently Amended) The methodsystem for processing business logic-rules of claim 45, further comprising means for scheduling the business rule instance, wherein said executing the business rule instance is according to said scheduling.

47. (Currently Amended) The methodsystem for processing business logic-rules of claim 46, wherein said scheduling the business rule instance is selected from the group consisting of delaying job execution, rescheduling job execution, scheduling repeat executions, and suspending execution.

48. (Currently Amended) The methodsystem for processing business logic-rules of claim 45, wherein said executing the business rule instance comprises:

testing conditions of the business rule instance;

if the instance conditions testing fails, deleting the business rule instance from the job queue; and

if the instance conditions testing succeeds:

executing actions specified by the business rule instance, and

deleting the business rule instance from the job queue.

49. (Currently Amended) The methodsystem for processing business logic-rules of claim 48, wherein said executing actions specified by the business

rule instance comprises:

scheduling execution using an execution schedule as determined according to scheduling data of the business rule instance; and  
executing actions specified by the business rule instance according to the execution schedule.

50. (Currently Amended) The methodsystem for processing business logic-rules of claim 45, further comprising means for resolving embedded pre-queue symbols in expressions of the event job corresponding to the business rule.

51. (Currently Amended) The methodsystem for processing business logic-rules of claim 50, wherein said resolving embedded pre-queue symbols in expressions of the event job comprises:

parsing the expression hierarchically; and  
resolving the symbols in a recursive manner.

52. (Currently Amended) The methodsystem for processing business logic-rules of claim 45, further comprising means for resolving embedded post-queue symbols in expressions of the business rule instance.

53. (Currently Amended) The methodsystem for processing business logic-rules of claim 52, wherein said resolving embedded post-queue symbols in expressions of the business rule instance comprises:

parsing the expression hierarchically; and  
resolving the symbols in a recursive manner.

54. (Currently Amended) The methodsystem for processing business logic-rules of claim 45, further comprising:

means for monitoring for incoming notification events; and  
means for reporting the incoming notification events to the business process system.

55. (Currently Amended) The methodsystem for processing business

logic-rules of claim 45, wherein said executing the business rule instance includes selectively transmitting an outgoing notification.

56. (Currently Amended) The ~~method~~system for processing business logic-rules of claim 55, wherein the outgoing notification is selected from the group consisting of mail, pager notification, Telalert, and NT network message notifications.

57. (Currently Amended) A business logic-application system for implementing business logic-rules and changing business processes associated with a business application, comprising:

a job queue module for maintaining a job queue and processing jobs in the job queue; and

a notification module in communication with said job queue module for monitoring for incoming notification events and reporting the incoming notification events to the job queue module,

wherein said job queue module writes an event job corresponding to a business logic-rule to the job queue upon receiving an incoming notification event that matches a triggering event of the business logic-rule,

said job queue module tests conditions of the business logic-rule corresponding to the event job, deletes the event job from the job queue, and, if conditions of the business logic-rule are met, writes a business rule instance to the job queue, and

said job queue module processes the business rule instance and deletes the business rule instance from the job queue;

wherein the business logic-rules can be selectively enabled, conditioned, calibrated, and disabled via a content page provided by a server at a client browser.

58. (Currently Amended) The business logic-application system of claim 57, wherein the job queue module processes the business rule instance by scheduling the business rule instance and executing the business rule instance is according to the scheduling.

59. (Currently Amended) The business logic-application system of claim 58, wherein the scheduling by the job queue module is selected from the group consisting of delaying job execution, rescheduling job execution, scheduling repeat executions, and suspending execution.

60. (Currently Amended) The business logic-application system of claim 57, wherein the job queue module processes the business rule instance includes testing conditions of the business rule instance, executing actions specified by the business rule instance if the conditions testing succeeds, and deleting the business rule instance from the job queue.

61. (Currently Amended) The business logic-application system of claim 60, wherein the job queue module executes actions specified by the business rule instance includes scheduling execution according to scheduling data of the business rule instance and executing actions specified by the business rule instance according to the execution scheduling.

62. (Currently Amended) The business logic-application system of claim 57, wherein the job queue module resolves any embedded pre-queue symbols in expressions of the event job corresponding to the business rule.

63. (Currently Amended) The business logic-application system of claim 62, wherein the job queue module resolves embedded pre-queue symbols by parsing the expression hierarchically and resolving the symbols in a recursive manner.

64. (Currently Amended) The business logic-application system of claim 57, wherein the job queue resolves, any embedded post-queue symbols in expressions of the business rule instance.

65. (Currently Amended) The business logic-application system of claim 64, wherein the job queue module resolves embedded post-queue symbols by

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parsing the expression hierarchically and resolving the symbols in a recursive manner.

66. (Currently Amended) The business logic-application system of claim 57, wherein the notification module monitors for incoming notification events and reports the incoming notification events to the job queue module.

67. (Currently Amended) The business logic-application system of claim 57, wherein the job queue module processes the business rule instance by selectively transmitting an outgoing notification to the notification module.

68. (Currently Amended) The business logic-application system of claim 67, wherein the notification module processes an outgoing notification task received from the job queue module by sending out a notification selected from the group consisting of mail, pager notification, Telalert and NT network message notifications.

3. Authorization for this examiner's amendment was given in a telephone interview with applicant's attorney, Kevin J. Kilka on September 1, 2004.

#### ***Reasons for Allowance***

4. Claims 1, 3-12, 14-23, 25-37 and 39-68 are allowed.

5. The following is an examiner's statement of reasons for allowance:

The cited prior art taken alone or in combination fails to teach the claims invention of remotely and in real time providing a structured content page to the user of a browser to customize a business software process by enabling, conditioning,

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calibrating or disabling related business rules so identified on the content page provided by the server.

The closest prior art (Helgeson et al, U.S. Pub. 2002/0049749) provides a system and method for integrating disparate business applications and managing the application process involving hardware resources and user efforts such that an efficient operation is achieved. Helgeson teaches an improved architecture for an enterprise business systems platform using user selected command for processing a web document. Helgeson does not teach rule customization by the user remotely from a browser. Such real time customization provided by the claimed invention improves the full effectiveness of the software application.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Correspondence Information***

Any inquiry concerning this information or related to the subject disclosure should be directed to the Examiner, Joseph P. Hirl, whose telephone number is (703) 305-1668. The Examiner can be reached on Monday – Thursday from 6:00 a.m. to 4:30 p.m.



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If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Anthony Knight can be reached at (703) 308-3179.

Any response to this office action should be mailed to:

Commissioner of Patents and Trademarks,

Washington, D. C. 20231;

or faxed to:

(703) 746-7239 (for formal communications intended for entry);

or faxed to:

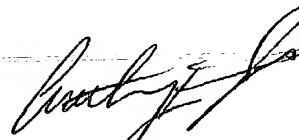
(703) 746-7290 (for informal or draft communications with notation of "Proposed" or "Draft" for the desk of the Examiner).

Note: During the last two weeks of October 2004, Art Unit 2121 will move to Carlyle, Randolph Building, 5<sup>th</sup> floor and my phone and fax number will change to: 571-272-3685 and 571-273-3685, respectively. Similarly, Anthony Knight's phone and fax numbers will change to: 571-272-3687 and 571-273-3687.



Joseph P. Hirl

September 8, 2004



Anthony Knight  
Supervisory Patent Examiner  
Group 3600